UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claim 1, 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Aboul-

Magd et al. (U. S. Pat. No. 6,490,249)

In regard to Claim 1, Aboul-Magd et al. teaches an "Adaptive Connection

Admission Control Scheme for Packet Networks. Aboul-Magd et al. goes on to disclose

An adaptive method and apparatus for regulating connection admission of traffic for

networks, which includes a limiter that limits a volume of traffic admitted to a network

through a connection admission control (CAC) procedure; and basing the connection

admission control procedure at least in part on a pure measurement CAC that is solely

based on measurements of actual traffic levels on the network. The connection

admission control is based both on the pure measurement-based CAC and on a pure

mathematical-based CAC that is solely dependent on user-supplied traffic parameters,

thereby combining both types of the CAC to form a hybrid admission criterion. Where

the network offers different services, managing link resources for CAC is effected by

regulating the CAC procedure based on capacities assigned to service bandwidth pools

that are defined for the different services offered by the network. (Abs) This profile is

supplied to the network at the set up phase in the form of a limited set of traffic

characteristics such as peak rate, sustained rate, and burst size. (Col 1, Ln 16-29)

development of an EBR algorithm requires the mapping of the traffic parameters to an

adequate statistical model and assumptions regarding the architecture of the

transmission scheduler of the node and the size of the available buffer. For the CBR

(constant bit rate) and premium services where the traffic peak rate is of paramount

importance, the traffic parameter of interest to the EBR algorithm is usually the traffic

peak rate. For VBR (variable bit rate) services, the traffic parameters of interest are the

peak rate, the average rate, and the burst size. (Col 2, Ln 20-33)

In regard to Claims 2, 6, 8 and 9, Aboul-Magd et al. discloses a limited set of

traffic characteristics such as peak rate(max load), sustained rate(equivalent bandwidth)

and burst size. (Col 1, Ln 23-26)

In regard to Claims 3, 5, 7 and 10 Aboul-Magd et al. discloses for the CBR

(constant bit rate) and premium services where the traffic peak rate is of paramount

importance, the traffic parameter of interest to the EBR algorithm is usually the traffic

peak rate. For VBR (variable bit rate) services, the traffic parameters of interest are the

peak rate, the average rate, and the burst size. (Col 2, Ln 26-32)

In regard to Claims 13 and 15, For VBR-like service, one EBR algorithm that has

seen wide use is the EGH (extended Gibbens-Hunt) algorithm [4]. EGH algorithm

assumes a FIFO (first-in-first-out) scheduler for the node and an aggregate buffer of

size B. The EGH algorithm maps the input traffic parameters to a two-state Markov-fluid

model where a source alternates between active and idle states with exponentially

distributed periods with parameters .alpha. and .beta. respectively. While being active,

traffic is assumed to be generated with rate .lambda. units/s. With those assumptions,

the EBR computed using the EGH algorithm for ATM-based networks is given by

EBR = (-[alpha + beta – gamma*lambda] + sqrt([alpha + beta – gamma*lambda]^2 +

4*gamma*beta*lambda)) / 2*gamma Where .gamma._=_-log(CLR)/B*Pr[W>0], and

CLR is the QoS parameter in terms of cell loss rate, B is the buffer size available at the

node, and P[W>0] is the probability that the combined rate of the active sources

exceeds the link capacity (probability of a non-empty queue). (Col 2, Ln 43-60)

In regard to Claim 14, the invention describes a method and procedure of a

hybrid CAC function that combines both the mathematical and the measurement

aspects of the traffic. (Col 3, Ln 38-40)

Claims 17-27 are not being rejected for reasons of continuity in the Claimed

subject matter. Different steps from step three to step 5 are claimed with dependencies

going back to claims, which do not contain the previous step. The previous steps are

referenced in current step claim and without proper reference back to have a flowing

order of steps on which they build upon each other, the claims can not be reviewed until

a correction of dependencies or wording is changed to allow for the proper flow of step

to step method based claiming.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 28-31, 33 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aboul-Magd et al. (U. S. Pat. No. 6,490,249) in view of Vilander et al. (U.S. Pub. No. 2004/0010609)

Aboul-Magd et al. does not disclose an AAL2 connection on an ATM virtual circuit at an Iub, IU-CS, or Iur interface in a UTRAN.

In regard to Claims 28-31, Vilander et al discloses AAL2 is a standard defined by ITU recommendation 1.363.2. An AAL2 packet comprises a three-octet packet header, as well as a packet payload. The AAL2packet header includes an eight-bit channel identifier (CID), a six-bit length indicator (LI), a five bit User-to-User indicator (UUI), and five bits of header error control (HEC). The AAL2 packet payload, which carries user data, can vary from one to forty-five octets. An object of the present invention, in one aspect, is utilization of Internet Protocol in lieu of the ATM protocol in the user plane protocol stacks for various interfaces (e.g., Iu-CS Interface, Iur Interface, and Iub Interface) of a radio access network such as UTRAN, and in another aspect is provision of a new transport network layer protocol usable on these interfaces as well as on the Iu-PS Interface. (Para 14, 15)

It would have been obvious to one of ordinary skill in the art to modify Aboul-Magd et al. to include the AAL2 connection and following interfaces in order to have the ability to carry more information on multiple interfaces where a new network layer can be used.

Aboul-Magd et al. does not disclose a radio access element or for control at the interface of a CDMA system.

In regard to Claims 33 and 34, one example of a radio access network is the Universal Mobile Telecommunications (UMTS) Terrestrial Radio Access Network (UTRAN). The UTRAN is a third generation system, which is in some respects, builds upon the radio access technology known as Global System for Mobile communications (GSM) developed in Europe. UTRAN is essentially a wideband code division multiple access (W-CDMA) system. (Para 7)

I would have been obvious to one or ordinary skill in the art to modify Aboul-Magd et al. to include the method in a radio access element and as part of a CDMA system in order to allow for more versatility in use with multiple systems.

Aboul-Magd does not disclose the method in a base station controller, RNC, or as part of a base station or a packet-switched network.

In regard to Claim 32 and 35-37, a telecommunications system has a protocol architecture over an interface between nodes of the telecommunications system, the protocol architecture including Internet Protocol as a protocol above a link layer protocol in a transport network layer. The protocol architecture can be used over one or more of several interfaces, including the interface between a radio access network and a core network [Iu Interface]; the interface between radio network controllers (RNCs) and the base stations (BSs) served thereby [Iub Interface]; and the interface between a Source RNC (SRNC) and a Drift RNC (DRNC) [Iub Interface]. A new XTP Protocol is proposed

as another aspect of the invention, which is usable in a protocol stack for the lu-PS
(packet switched) implementation as well as over the lu-CS, lub and lur Interfaces.
(Abs)

It would have been obvious to one of ordinary skill in the art to modify Aboul-
Magd to include the method in base stations, a RNC, or a core network element in order
to allow for more efficient use of the method across an entire system and not a single
part giving more reliable and consistent results.

5.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aboul-
Magd et al. (U. S. Pat. No. 6,490,249) in view of Bjoerkman et al. (U.S. Pub.
2005/0152272)

Aboul-Magd et al. does not disclose a memory for storing relevant data.

Bjoerkman et al. discloses the processing section 12 has a processor 22 and a
memory 23, which contains programs and data to enable the connection admission
control of the present invention to be carried out.

It would have been obvious to one of ordinary skill in the art to modify Aboul-
Magd et al to include a memory in order for quicker retrieval of information relating to a
system without having to recalculate or re-measure all the pertinent information needed.

6.   Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Aboul-Magd et al. (U. S. Pat. No. 6,490,249) in view of Kola et al. (U.S. Pub. No.
2004/0213165)

Aboul-Magd et al. does not disclose determining a best model for use.

Kola et al. discloses the model generator illustrated in FIG. 2 further comprises a traffic analyzer TA for analyzing characteristics of the traffic, and a model builder MB for building the port number specific statistical models based on the analyzed characteristics of the traffic. The model generator illustrated in FIG. 2 further comprises a general model builder GMB for building at least one general statistical model of the traffic. Said characteristics of the traffic comprise number and size of small packets at the start, number and size of small packets at the end, number and size of packet calls, inactivity period, and the presence of TCP slow start. The model is optimized as to be compared with having the "severest constraints." (Para 46)

It would have been obvious to one of ordinary skill in the art to modify Aboul-Magd to include a model builder as taught by Kola et al. in order to allow for a most efficient traffic model to be built when a standard model does not give the most accurate representation.

Allowable Subject Matter

7.   Claim 4 is allowed over the prior art of record.

Response to Arguments

8.   Applicant's arguments have been fully considered but they are not persuasive.

In regard to arguments against claim 1, the applicant states no parameters are

adapted dynamically as a function of a traffic model, the examiner disagrees with this

statement. Aboul-Magd teaches a admission criterion involving many different

parameters including measured parameters from the network. One such parameter is

Ubf, under-booking factor which ideally should be changed depending on the time of

day to be properly reflecting the expected traffic pattern, making it a dynamically

adapting parameters which is modeling the traffic present which covers the claimed

subject matter of including at least one parameter of an algorithm that is dynamically

adapted. (Col 6) In regard to Claim 7, the same teachings can be used to see that

relative proportions in the algorithm taught in which different traffic types are taken into

consideration.

Arguments in regards to Claims 28-37, 16 and 11-12 claim deficiencies of claim 1

as reasons for allowance which, are above overcome.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Elcenko whose telephone number is (571) 272-8066. The examiner can normally be reached on M-F 7:30 AM through 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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